

REMARKS

Claims 1-47, 49, and 53-61 are pending in the instant application. Claims 62-69 have been withdrawn. Claims 48 and 50-52 have been canceled.

Drawings

The drawings were objected to because of indistinct labels. Applicants submit concurrently herewith formal drawings. The formal drawings have distinct labels, and as such, the objections to the drawings because of indistinct labels is moot at this time.

35 U.S.C. §102 Rejection

The present Office Action rejected Claims 58-61 under 35 U.S.C. 102(e) as being anticipated by Birrell et al. (US Patent No. 6,332,175). Applicants have reviewed the above cited references and respectfully submit that the present invention as recited in Claims 58-61 is neither anticipated nor rendered obvious by the Birrell et al. reference.

Independent Claims 58 and 60

Applicants respectfully point out that independent Claim 58 and 60 each recite that the present invention includes, in part:

a mini-operating system running instead of a first operating system
controlling said computer system that only operates to play said audio files . . .

The present invention pertains to a low power digital audio decoding playing system for computing devices. In particular, independent Claims 58 and 60 recite that a mini-

operating system is running instead of a first operating system controlling the computer system, wherein the mini-operating system operates only to play the audio files. In independent Claim 58, the mini-operating system controls an audio controller for playing the audio files. As such, when a user initiates the player mode, only the mini-operating system, instead of the full system operating system, is initiated for playing the audio files. Thus, the power savings achieved ensures that the system CPU, the peripheral chips, the hard disk drive, and other controllable system elements are in an idle state for the largest amount of time possible.

Applicants respectfully note that the Birrell et al. reference does not teach nor suggest the present low power digital audio decoding/playing system that includes a mini-operating system that operates instead of a full system operating system. In particular, Applicants respectfully note that the Birrell et al. reference does not disclose a second operating system for playing audio files instead of a first or full system operating system for playing the audio files.

Thus, Applicants respectfully submit that the present invention as disclosed in independent Claims 58 and 60 is not anticipated by the Birrell et al. reference, and is in a condition for allowance. In addition, Applicants respectfully submit that Claim 59 which depends from independent Claim 58 is also in a condition for allowance as being dependent on an allowable base claim. Also, Applicants respectfully submit that Claim 61 which depends from independent Claim 60 is also in a condition for allowance as being dependent on an allowable base claim.

103 Rejections

Claims 1-19, 31-32, 47, 48, 54, and 55 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Birrell (U.S. Patent 6,332,175) in view of Jacobs (U.S. Patent 6,006,285). Also, Claims 20-28, 34-44, 50-53, 56, 57 and 62-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birrell (U.S. Patent 6,332,175). Additionally, Claims 29, 30, 33, 45, 46, and 49 are rejected under 35 USC 1039a) as being unpatentable over Birrell et al. in view of Alexander (US Patent No. 6,380,968). The Applicants have reviewed the cited references and respectfully submit that embodiments of the present invention as are set forth in Claims 1-57 and 62-63 are neither anticipated nor rendered obvious by the Birrell et al., Jacobs and Alexander references taken alone or in combination.

Independent Claim 1

The Examiner is respectfully directed to independent Claim 1 which sets forth that an embodiment of the present invention includes a computer system adapted to play audio files, that comprises:

...a system CPU; memory; at least one drive comprising compressed audio data, said compressed audio data residing in one or more audio files; a play list software program for selecting and storing a play list comprising one or more of said audio files; a first operating system adapted to control at least said system CPU and said memory; and a second operating system, said second operating system being stored in BIOS and adapted to retrieve said play list and cause said drive to read at least one said audio file of said play list, to cause said system CPU to decompress the compressed audio data of said file and provide decompressed audio data, and to cause

said decompressed audio data to be stored in said memory.

Applicants respectfully note that the Birrell et al. and Jacobs et al. reference taken alone or in combination do not teach nor suggest the computer system adapted to play audio files that includes a second operating system that causes a system CPU to decompress compressed audio data, as claimed in independent Claim 1 of the present invention.

Applicants respectfully assert that it is conceded in the present Office Action that the Birrell et al. reference does not disclose a second operating system, said second operating system being stored in BIOS and adapted to retrieve said playlist and cause said drive to read at least one of said audio file of said play list, to cause said system CPU to decompress the compressed audio data of said file and provide decompressed audio data, and to cause said decompressed audio data to be stored in said memory.

Additionally, Jacobs et al. does not anticipate or render obvious a second operating system that causes the system CPU to decompress the compressed audio data of said file and provide decompressed audio data. As expressly disclosed in Jacobs's reference, Jacobs et al. only disclose a computer system which is capable of playing audio CDs in a CD-ROM drive independent of an operating system by using an embedded CD-ROM drive application or a CD-ROM driver controller (Col. 1, Lines 57-59). That is, the Jacobs reference discloses a CD-ROM application that acts independently of the system CPU, which is distinct from the embodiments of the present invention as recited in independent Claim 1. More specifically, referring to Col. 1, Lines 64-67 and Col. 2, Lines 1-5, which are extracted by Examiner, Jacobs et al. only disclose an audio CD mode switch to activate the computer system with an

operation system or activate the CD-ROM drive application to play audio CDs independent of the operation system. The Examiner is respectfully directed to Col. 4, Line 36 – Col. 5, Line 27 of the Jacobs patent. It will be appreciated that the audio CD mode switch 56 is used to activate the computer system in a PC mode, or activate the computer system in an audio CD mode. In the PC mode, the operating system proceeds to access and execute the system BIOS. In the audio CD mode, operating system is not loaded (Col 4, Line 67- Col 5, Line 1).

Nowhere in the Jacobs's reference is a computer system having a second operating system to cause the system CPU to decompress the compressed audio data of the file and provide decompressed audio data. Furthermore, Jacobs did not disclose any play list comprising one or more of said audio files, or any play list which can be retrieved by the second operating system to cause the drive to read the audio file of the play list. In fact, Jacobs failed to disclose any second operating system, not to mention the fact that a second operating system stored in BIOS and adapted to cause the system CPU to decompress the compressed audio data of the file shown or suggested as is recited in Claim 1. Consequently, the embodiments of the Applicant's invention as are set forth in Claim 1 are neither anticipated nor rendered obvious by Jacobs et al.

Furthermore, Birrell does not disclose any second operation system. Nowhere in the Birrell's reference is a computer system having a second operating system adapted to cause the system CPU to decompress the compressed audio data of the file. Birrell did not disclose any play list which can be retrieved by the second operating system to cause the drive to read the audio file of the play list. Consequently, the embodiments of the Applicant's invention as

are set forth in Claim 1 are neither anticipated nor rendered obvious by Birrell either alone or in combination with Jacobs.

Thus, Applicants respectfully submit that the present invention as disclosed in independent Claim 1 is not anticipated by the Birrell et al. reference taken alone or in combination with the Jacobs et al. reference, and is in a condition for allowance.

Independent Claim 7

Applicants respectfully submit that Claim 7 includes the similar limitations, i.e., an operating system stored in BIOS and adapted to cause the system CPU to decompress the compressed audio data, which Birrell et al. and Jacobs et al. do not anticipate or render obvious.

Applicants respectfully submit Claim 7 is patentable over the reference as applied not only for the reason advanced with respect to Claims 1, but also on their own specific merits. Applicants respectfully point out that independent Claim 7 recites, in part:

a play list software program executable under said first operating system, said play list software program being adapted to permit selection and storage of a play list comprising one or more of said audio files; and
(Emphasis Added)

Nowhere in the Jacobs's reference or in the Birrell's reference is a computer system having a play list software program executable under the first operating system to generate a play list, which is retrieved by the second operating system. The second operating system will play the audio file according to the play list. Neither Jacobs nor Birrell discloses the play

list created under the first operation system for playing the audio file under the second operating system. Consequently, Claim 7 overcome the rejection under 35 U.S.C. 103(a).

Independent Claims 2-5, 9, and 10

Applicants respectfully submit that Claims 2-5, 9 and 10 include the similar limitations, i.e., a mini-operating system running instead of a first operating system controlling the computer system, wherein the mini-operating system operates only to play said the files, and wherein the mini-operating system is stored in BIOS and adapted to cause the system CPU to decompress the compressed audio data, which Birrell et al. and Jacobs et al. do not anticipate or render obvious. Consequently, these Claims overcome the rejection under 35 U.S.C. 103(a).

Independent Claims 8

Applicants respectfully submit that Claim 8 includes the similar limitations as claimed in Claim 1, i.e., an operating system stored in BIOS and adapted to play the audio file, which Birrell et al. and Jacobs et al. do not anticipate or render obvious.

Applicants respectfully submit Claim 8 is patentable over the reference as applied not only for the reason advanced with respect to Claims 1, but also on their own specific merits. Applicants respectfully point out that independent Claim 8 recites, in part:

a play list software program executable under said first operating system, said play list software program being adapted to permit selection and storage of a play list comprising one or more of said audio files; and
(Emphasis Added)

Nowhere in the Jacobs's reference or in the Birrell's reference is a computer system having a play list software program executable under the first operating system to generate a play list, which is retrieved by the second operating system. The second operating system will play the audio file according to the play list. Neither Jacobs nor Birrell discloses the play list created under the first operation system for playing the audio file under the second operating system. Consequently, Claim 8 overcomes the rejection under 35 U.S.C. 103(a).

Independent Claims 11 and 12

Applicants respectfully submit that Claims 11 and 12 include similar limitations as independent Claim 1, i.e., a second operating system running instead of a first operation system, wherein the second operating system operates to play compressed audio files, and is stored in BIOS and adapted to cause the system CPU to decompress the compressed audio data, which Birrell et al. and Jacobs et al. do not anticipate or render obvious. Consequently, these Claims overcome the rejection under 35 U.S.C. 103(a).

Independent Claim 13

Applicants respectfully submit that Claim 13 includes similar limitations as independent Claim 1 including a second operating system operating independently of the system CPU, wherein the second operating system stored in BIOS and adapted to cause the system CPU to decompress the compressed audio data, which Birrell et al. and Jacobs et al. do not anticipate or render obvious. Consequently, independent Claim 13 overcomes the rejection under 35 U.S.C. 103(a).

Independent Claims 14-17

Applicants respectfully submit that Claims 14-17 includes similar limitations as independent Claim 1 including a second operating system operating independently of the first system operating system, wherein the second operating system stored in BIOS and adapted to cause the system CPU to decompress the compressed audio data, which Birrell et al. and Jacobs et al. do not anticipate or render obvious. Consequently, independent Claims 14-17 overcomes the rejection under 35 U.S.C. 103(a).

Independent Claims 18 and 19

Applicants respectfully submit that Claim 18 includes the similar limitations as claimed in Claim 1, i.e., an operating system stored in BIOS and adapted to play the audio file, which Birrell et al. and Jacobs et al. do not anticipate or render obvious. Nowhere in the Jacobs's reference or in the Birrell's reference is there a computer system having a mini-operating system stored in BIOS running instead of a first operating system that operates to play audio files, and a switch to cause the operating system to boot. The mini-operating system then control the audio controller to play the audio file. Neither Jacobs nor Birrell discloses the switch to cause the mini-operating system to boot such that the mini-operating system control the audio controller to play the audio file. Consequently, Claims 18 and 19 overcomes the rejection under 35 U.S.C. 103(a).

Independent Claim 20

The Examiner is respectfully directed to independent Claim 20 which sets forth that an embodiment of the present invention includes a computer system adapted to play audio files, that comprises:

...a system CPU; memory; at least one drive comprising compressed audio data; and an audio controller coupled to said system CPU, memory and drive; said audio controller being adapted to cause said drive to read said compressed audio data, to cause said system CPU to decompress said compressed audio data, thereby providing decompressed audio data, and to cause said decompressed audio data to be stored in said memory.

Birrell et al. do not disclose any audio controller adapted to cause the drive to read the compressed audio data and the CPU to decompress the compressed audio data. Referring to Col. 5, Line 9-14 in the Birrell's reference, the control logic of the system is implemented primarily in the form of control program that is executed by the system's data processor and may be stored in ROM. Applicants, however, respectfully submit that the ROM with the control programs does not anticipate or render obvious an audio controller to cause the drive to read the compressed audio data and to cause the system CPU to decompress the compressed audio data. The claimed invention must be considered as a whole. The control program may be stored in ROM, but is executed by the processor. In other words, the play procedure or the decompression procedure is caused by the processor but not the ROM with the control programs. By contrast, the audio controller of the claimed invention is able to cause the system CPU to decompress the compressed audio data. Applicants respectfully submit that Birrell et al. failed to disclose the claim limitations. Consequently, the embodiments of the Applicant's invention as are set forth in Claim 20 are neither anticipated nor rendered obvious by Birrell et al.

Furthermore, Applicants hereby traverse the finding by the Examiner as "official notice" that it would have been obvious to store the decompressed data prior to the A/D

conversion. It is conceded that the Birrell et al. reference discloses storing the decompressed data in memory. Applicants respectfully assert that the taking of “official notice” is inappropriate since it is not suggested or rendered obvious by the Birrell et al. reference for the use of a second operating system for accessing compressed data, and decompressing the data. Applicants hereby respectfully demands the Examiner to produce authority for taking the “official notice.”

Applicants also respectfully submit that Birrell et al. do not anticipate or render obvious the present claimed invention as is recited in Claims 21-36 which depend from Claim 20. Consequently, these Claims overcome the rejection under 35 U.S.C. 103(a) as being dependent on an allowable base claim.

Independent Claims 37 and 57

Applicants respectfully submit that Claims 37 and 57 include the similar limitations as claimed in Claim 20, i.e., an audio controller being adapted to cause the system CPU to decompress the compressed audio data, which Birrell et al. do not anticipate or render obvious. Consequently, these Claims overcome the rejection under 35 U.S.C. 103(a).

Independent Claims 38 and 53-56

Applicants respectfully submit that Claims 38 and 53-56 include the similar limitations as claimed in Claims 1 and 3, i.e., a mini-operating system that is operates independently of a first operating system controlling the computer system, wherein the mini-operating system is operable only to play the compressed audio files, which Birrell et al. do not anticipate or render obvious. Consequently, independent Claims 38 and 53-56 overcomes

the rejection under 35 U.S.C. 103(a). Also, Applicants respectfully submit that Claims 39-47 and 49 which depend from independent Claim 38 are also in a condition for allowance as being dependent on an allowable base claim.

Conclusion

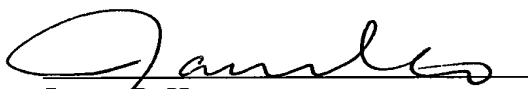
In light of the above-listed remarks, the Applicants respectfully request allowance of the remaining Claims.

Based on the arguments presented above, Applicants respectfully assert that Claims 1-47, 49, and 53-61 overcome the rejections of record. Therefore, Applicants respectfully solicit allowance of these Claims.

The Examiner is urged to contact the Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,
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Dated: 2/21/06


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